



# Spinal Cord Injury

Seattle, WA

## QUERI Fact Sheet

January 2006

**QUERI currently focuses on ten conditions that are prevalent and high-risk among veteran patients: chronic heart failure, colorectal cancer, diabetes, HIV/ AIDS, ischemic heart disease, mental health, polytrauma and blast-related injuries, spinal cord injury, stroke, and substance use disorders.**

Recent estimates in the U.S. indicate that approximately 207,000 individuals have some type of spinal cord injury and/or disorder (SCI&D) that significantly affects their life activities. Of these, almost 22,800 receive care within the VA health care system. While considered a highly heterogeneous population, these individuals face common obstacles and barriers in relation to attainment of their independent living and quality of life aspirations.

SCI&D is not a single health care problem nor specific disease, but a lifelong condition. Like many other people who live with various severe chronic diseases, individuals with SCI&D live with a condition that cannot be cured, requires ongoing management of impairments, and demands prevention of SCI-related secondary complications. Another important fact is that between one-half to three-quarters of these individuals are unemployed. This is particularly significant because most are injured at a young age (almost 60% are < 30 years of age at onset). The direct and indirect costs of care for persons with SCI&D are extremely high, at an estimated \$9.7 billion per year.

Today, people with SCI&D are living longer than ever before - more than 25% of individuals with SCI&D have had their injury for more than 20 years and approximately half are older than 50 years of age. This increased life expectancy and consequent aging of the SCI population is associated with an increased prevalence of common chronic diseases. Therefore, it is essential to provide both preventive and specialty medical services that improve

length and quality of life, promote healthy aging, and address the chronic impairments associated with SCI&D.

The Spinal Cord Injury Quality Enhancement Research Initiative (SCI-QUERI) utilizes the QUERI 6-step process (see back page) to improve the quality of care and health outcomes of veterans with SCI&D. The mission of SCI-QUERI is to identify and address knowledge gaps, promote research, and conduct activities that improve lifelong medical care, health-related quality of life, and community integration of individuals with SCI&D. The high-risk or high-cost problems that have been the focus of SCI-QUERI include respiratory, metabolic and cardiovascular impairments, pressure ulcers, and chronic pain because in the SCI&D population-

- Respiratory, metabolic and cardiovascular impairments are common causes of morbidity and mortality;
- Pressure ulcers account for significant morbidity and death, as well as hospital-

izations, outpatient visits, and high costs; and

- Chronic pain is a long-standing problem and quality of life issue for many with SCI&D.

### SCI-QUERI Projects and Findings

SCI-QUERI has adapted the chronic care model developed by Wagner and colleagues to apply to SCI&D preventive, chronic, and specialty-based care. Guided by this model SCI-QUERI will draw from the VA organizational structure and from the SCI Strategic Healthcare Group to support patient-centered care that is safe, efficient, effective, timely and equitable. To reach this goal, SCI-QUERI will promote quality interactions and partnerships between practitioners and patients.

A major goal of this model is to develop a system of planned care that is evidence-based, patient-centered, and system-minded for preventive and sustaining care for

### The SCI-QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The research coordinator for SCI-QUERI is **Frances Weaver, PhD**, and the clinical co-coordinators are **Barry Goldstein, MD, PhD**, and **Margaret Hammond, MD**. This Executive Committee includes other experts, representatives of service organizations, and consumers in the field of spinal cord injury: Vivian Beyda, DrPH (United Spinal Association); Stephen Burns, MD; Fred Cowell, BS, (Paralyzed Veterans of America); Susan Garber, MA, OTR; David Gater, MD, PhD; Ronald J. Girona, PhD; Jennifer Hastings, PT, MS, NCS; Helen Hoenig, MD; Pending-Implementation Research Coordinator; Audrey Nelson, PhD, RN; Michael Priebe, MD; Arthur M. Sherwood, PE, PhD (National Institute on Disability and Rehabilitation Research); and Ann M. Spungen, EdD.

the many problems experienced by people with SCI&D. Interventions will concentrate on several areas including self-management support, delivery system design, decision support, and clinical information systems.

Self-management support emphasizes the patient's central role in the management of most chronic conditions and utilizes collaboratively set goals and problem solving. Delivery system design recognizes the need to implement system-level changes at multiple levels. Decision support integrates evidence-based guidelines and care into daily clinical practice, and clinical information systems are used to provide useful and timely information for both providers and patients.

A successful end result of these efforts will be informed, empowered patients working collaboratively with prepared, proactive health care teams that increase health care quality for persons with SCI&D.

### **Additional SCI-QUERY Research**

- **Respiratory Impairments:** Current work focuses on increasing influenza and pneumococcal pneumonia vaccinations in the SCI&D population. Vaccination rates of veterans with SCI&D have improved to approximate the rate of the general VA population, well above the rate of the general population. In addition, VA's policy on influenza vaccinations now includes SCI&D as a high-risk category. Future plans to address other pulmonary impairments include tobacco cessation, management of community-acquired pneumonia, sleep apnea, improved cough, and elimination of pulmonary secretions.

- **Metabolic and cardiovascular impairments:** Using the Chronic Care Model as a framework, investigators will address current management of cholesterol, high blood pressure, and diabetes in persons with SCI&D.
- **Pressure Ulcers:** SCI-QUERY investigators have developed and are promoting efforts to identify intervention strategies that reduce the frequency and seriousness of pressure ulcers. Another project is being planned to improve documentation of pressure ulcer characteristics through standardization of data collection.
- **Chronic Pain:** There is a limited evidence base for the treatment of chronic pain following spinal cord injury. SCI-QUERY team members are reviewing high quality research about pain definition, assessment, and treatment, and are gaining a clearer understanding of current pain management practices in the VA SCI&D population.

## **THE QUERY PROCESS**

The QUERY process includes six steps:

- 1) identify high-risk/high volume diseases or problems;
- 2) identify best practices;
- 3) define existing practice patterns and outcomes across VA and current variation from best practices;
- 4) identify and implement interventions to promote best practices;
- 5) document that best practices improve outcomes; and
- 6) document that outcomes are associated with improved health-related quality of life.

### **Contact information for SCI-QUERY**

Charlesnika T. Evans, MPH  
Research Administrative Coordinator  
Tel: 708/202-4868

E-mail:

Charlesnika.Evans@med.va.gov

Or

Suparna Rajan, PhD  
Clinical Administrative Coordinator  
Tel: 206/277-1234

E-mail: Suparna.rajan@med.va.gov

### **Contact for General Information:**

Linda McIvor, MHS  
QUERY Program Manager,  
Health Services Research and  
Development Service

Tel: 202/254-0230

E-mail: linda.mcivor@va.gov

**VA's Research and Development QUERY Web site: [www.hsrdr.research.va.gov/queri](http://www.hsrdr.research.va.gov/queri)  
SCI-QUERY direct web link: [www.sci-queri.research.med.va.gov](http://www.sci-queri.research.med.va.gov)**